

COUNCIL REPORT



CITY OF MOUNTAIN VIEW

AGENDA: January 25, 2011

8.1

CATEGORY: New Business

DEPT.: Public Works

TITLE: Residential Energy Assessment and Upgrade Program—Authorize Professional Services Agreement

RECOMMENDATION

Authorize the City Manager to execute a professional services agreement with High Energy Audits of Los Altos Hills, California, to design and implement a residential energy assessment and upgrade program, for a total not-to-exceed fee of \$319,000.

FISCAL IMPACT

The residential energy assessment and upgrade program is funded with \$343,000 from the City's Federal Energy Efficiency and Conservation Block Grant (EECBG) funds. Program costs include the recommended professional services agreement to develop and implement the program (\$319,000) and administrative costs (\$24,000). Sufficient funds are available for the recommended action.

BACKGROUND AND ANALYSIS

In July 2010, the City released a Request for Proposals for the Residential Energy Assessment and Upgrade Program. Three firms submitted proposals and were interviewed by staff. Two different approaches to the program were reflected in the proposals: (1) spending a majority of the budget on Tier 2/3 home upgrade rebates; and (2) allocating a majority of the budget to in-home energy assessments and low-cost upgrades and outreach. On December 8, 2010, staff recommended and the Council Environmental Sustainability Committee (CESC) endorsed the second approach because it would reach a larger number of participants and lead to greater greenhouse gas emissions reductions (see Attachment 1—December 8, 2010 CESC Staff Report).

Based on the direction from the CESC and staff's assessment of the proposals, staff recommends awarding a professional services agreement to High Energy Audits (HEA) to design and implement the residential energy assessment and upgrade program that will be called "Energy Upgrade Mountain View." HEA was selected based on its deep understanding of local residential energy efficiency and greenhouse gas (GHG) reduction methods and technologies. Acterra, a local nonprofit specializing in environmental education and action, will subcontract to HEA for the project.

City staff will work with HEA and Acterra to achieve the following goals through the Energy Upgrade Mountain View program:

- Maximize and quantify the reduction in community-wide GHG emissions through improved residential energy efficiency and increased use of renewable energy.
- Provide a user-friendly experience for residents to conduct energy assessments and perform upgrades.
- Engage residents in saving additional energy through behavior modification commitments.
- Educate residents about additional home energy saving resources available.

Targeted participants for the Energy Upgrade Mountain View program include single-family homeowners (particularly in older and high-energy-use homes), multi-family property owners, single-family renters and multi-family renters (with some focus on low income). The Energy Upgrade Mountain View program, as designed by HEA, is expected to reach more than 2,400 households through the following activities/program elements:

Program Element	Description	Target Participants	No. of Homes
Tier 1 Single-Family	No-cost, in-home assessments based on an 80-point checklist (Attachment 2) that includes installing simple efficiency devices and measures (e.g., compact fluorescent lights, smart power strips, low-flow showerheads) and engages residents in making behavior change commitments. (Performed by Acterra)	Homeowners, Renters	250
Tier 1 Multi-Family	No-cost, in-home assessments based on an 80-point checklist that includes installing simple efficiency devices and measures (e.g., compact fluorescent lights, smart power strips, low-flow showerheads) and engages renters in making behavior change commitments. (Performed by Acterra)	Renters	250

Program Element	Description	Target Participants	No. of Homes
Schools	A combination of age-appropriate household energy efficiency educational materials and a competition to see which local schools can generate the highest level of greenhouse gas reductions.	Homeowners, Renters	1,000
Multi-Family Building Owners	In conjunction with the County, a pilot program to educate and provide modest rebates for building owners to make energy- and water-saving upgrades.	Building Owners	10 M/F Bldgs.
High-Energy Homes	No-cost, "intelligent" on-line assessments that help high-energy-using residents identify ways to reduce their energy use.	Homeowners, Renters	800
Tier 2/3 Upgrade Information	Provide information on "Energy Upgrade California," focusing on participants best suited for EUC based on their home energy use characteristics.	Homeowners	100
			2,410

The Tier 1 assessments conducted by Acterra would include a 2- to 2-1/2-hour home visit during which home energy use will be analyzed, energy-saving devices will be installed (a \$60 estimated retail value) and residents will learn how to save more energy and money by making additional behavior and fixture/appliance changes. The City's cost for each assessment, including installed devices and community outreach and advertising, is approximately \$280. Renters participating in a Tier 1 assessment are expected to achieve an average \$70 to \$115 annual energy savings and homeowners' annual savings is estimated to be \$80 to \$135. Renters and homeowners participating in the Tier 1 assessments may realize even greater energy savings if they make additional behavior modifications beyond just participating in the Tier 1 assessment.

To encourage participation in the Energy Upgrade Mountain View program, the City and HEA will promote the program through multiple channels/outlets, including:

- Improvements to the City's web site to provide information on all program elements.
- Live help—HEA will make staff available to respond to questions during business hours, with possible e-mail support after hours.

- A social marketing program.
- Development and distribution of customized marketing materials specific to the target participant groups.
- Multicultural outreach—in conjunction with City Community Outreach staff, targeted messages will be designed using multilingual and multicultural media and techniques to reach Mountain View's English, Spanish, Chinese and Russian language communities.
- Local partnerships with schools, homeowner associations, neighborhood associations, multicultural groups, Green Mountain View and local businesses.

A more detailed description of the scope of services to be provided by HEA and Acterra is provided in Attachment 3.

HEA estimates that its Energy Upgrade Mountain View program will result in a decrease of 1,500 to 2,500 metric tons of GHG emissions per year, approximately 30 percent to 50 percent of the desired residential emissions reductions to meet the City's 2012 reduction target. A 2,500 metric ton decrease in GHG emissions is the equivalent of removing 508 cars from the road for a year.

At the end of the program, HEA will determine the most effective program components and campaigns and create a list of recommendations on how to make improvements for future campaigns. This will give the City a clear path for how to most efficiently reduce residential energy usage and enable it to more accurately predict the costs and benefits of future programs.

The proposed schedule for the Energy Upgrade Mountain View program will meet the Federal EECBG requirement to spend down the entire \$343,000 in grant funding by December 31, 2012.

February 2011:	Project Kick-Off Meeting
March/April 2011:	Roll Out Program to Mountain View Residents
December 31, 2012:	Complete Program

CONCLUSION

Staff recommends Council authorize the City Manager to enter into a professional services agreement with High Energy Audits to design and develop a residential energy assessment and upgrade program for Mountain View.

PUBLIC NOTICING

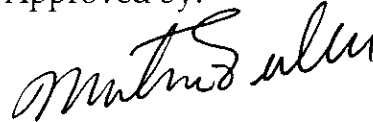
In addition to distributing copies of this report in accordance with the City's standard agenda posting requirements, copies of the report have been sent to HEA and Acterra representatives.

Prepared by:



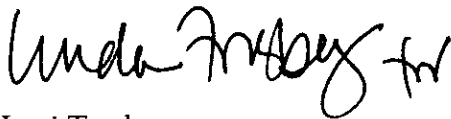
Stephen P. Attinger
Environmental Sustainability Coordinator

Approved by:



Michael A. Fuller
Public Works Director

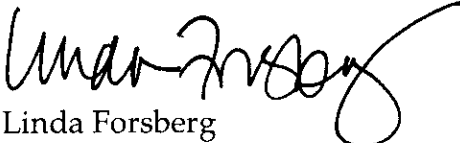
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Linda Forsberg
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SPA/7/CAM
916-01-25-11M-E^

- Attachments:
1. December 8, 2010 CESC Staff Report
 2. Acterra "Green@Home" 80-Point Energy Savings Checklist
 3. High Energy Audits and Acterra Scope of Services

**CITY OF MOUNTAIN VIEW
MEMORANDUM**

DATE: December 2, 2010

TO: Council Environmental Sustainability Committee

FROM: Stephen P. Attinger, Environmental Sustainability Coordinator

SUBJECT: RESIDENTIAL ENERGY ASSESSMENT AND UPGRADE PROGRAM

RECOMMENDATION

Approve staff's recommended approach to conducting residential energy assessments and upgrades.

BACKGROUND AND ANALYSIS

In May 2009, the City Council approved a proposed spending plan for the City's \$719,000 in Federal Energy Efficiency and Conservation Block Grant funds (ARRA stimulus funds). The proposed spending plan included the following activities:

1. Upgrading Rengstorff Park and Cuesta Park tennis court lights with energy-efficient bulbs (\$76,000).
2. Upgrading the Shoreline at Mountain View microturbines (\$300,000).
3. Providing free or subsidized residential energy assessments and simple efficiency device installations to Mountain View residents (\$343,000).

Staff is testing various high-efficiency lighting products for the tennis court project to determine which product(s) provide the best lighting results and reduced energy use, and will present a plan for replacing the microturbines to Council on December 7, 2010.

Residential Energy Assessment and Upgrade Program

In early June 2010, the Council Environmental Sustainability Committee (CESC) and members of the community provided feedback on the objectives and structure for a residential energy assessment and upgrade program. The feedback centered around the following comments: (1) the program should focus on the needs of homeowners, multi-family property owners and renters; (2) Tier 1 assessments should be offered as Tier 2 and Tier 3 upgrades can be expensive and disruptive to the homeowner; and

(3) there should be a multilingual outreach program. Staff released a Request for Proposals (RFP) in mid-July for a firm(s) to design and implement such a program. Three proposals were received, offering the following two different approaches.

- Approach A: Allocate a majority of the budget to a Tier 2/3 home upgrade rebate program that provides \$500 to \$1,000 (depending on the level of upgrade) each to approximately 150 residents. This City rebate would augment the existing PG&E rebate program which offers incentives from \$1,000 to \$3,500 for Tier 2/3 home energy upgrades. Allocate the remainder of the budget to providing: (1) no-cost, in-home Tier 1 energy assessments and installing simple efficiency devices, e.g., compact fluorescent light bulbs; and (2) rebates for upgrades by multi-family property owners.
- Approach B: Allocate a majority of the budget to providing: (1) no-cost, in-home Tier 1 energy assessments and installing simple efficiency devices, e.g., compact fluorescent light bulbs; and (2) an on-line tool/survey that assists residents with high energy bills identify the biggest bang-for-the-buck, simple actions to take to reduce energy usage. Allocate the remainder of the budget to providing rebates for upgrades by multi-family property owners.

Following careful consideration and evaluation of the merits of the methodologies offered by each of the proposers, staff recommends a program similar to "Approach B," primarily because Tier 2/3 upgrades generally cost \$5,000 to \$15,000, so even with rebates from PG&E and the City, the homeowner is still left with a large financial burden. In a depressed economy, this would likely be too high a bar for many residents. In addition, Approach B yields higher greenhouse gas reductions (as compared to Approach A) due to engaging a larger number of residents and targeting high-energy-using homes.

Program Objectives

The broad goals of the program include:

- Through improved residential energy efficiency and increased use of renewable energy, maximize the reduction in community-wide GHG emissions to meet the City's 2012 reduction goal and quantify the reductions.
- Provide a user-friendly experience for residents to attain energy assessments and perform upgrades.
- Engage residents in saving additional energy through behavior modification commitments.

- Educate residents about additional home energy saving resources available.
- Generate new jobs.

Target Participants

The City's residential energy assessment and upgrade program will be targeted at the following groups:

- Single-family homeowners (particularly in older and high-energy-use homes).
- Multi-family property owners.
- Single-family renters.
- Multi-family renters (with some focus on low-income).

Program Elements

Staff proposes a program that incorporates the following elements.

Program Element	Description	Target Participants	# of Homes
Tier 1 Single-Family	A no-cost, in-home assessment based on an 80-point checklist that includes installing 6 to 7 simple efficiency devices (e.g., compact fluorescent lights, smart power strips, low-flow showerheads) and engages residents in making behavior change commitments.	Homeowners, Renters	250
Tier 1 Multi-Family	A no-cost, in-home assessment based on an 80-point checklist that includes installing 6 to 7 simple efficiency devices (e.g., compact fluorescent lights, smart power strips, low-flow showerheads) and engages renters in making behavior change commitments.	Renters	250
Schools	A competition to see which local schools can generate the highest rate of household participation in the program.	Homeowners, Renters	1,000
Multi-Family Building Owner	In conjunction with the County, a pilot program that educates and provides modest rebates for building owners to make energy- and water-saving upgrades.	Building Owners	10 M/F Bldgs.

Program Element	Description	Target Participants	# of Homes
High-Energy Homes	A no-cost, "intelligent" on-line assessment that helps high-energy-using residents identify ways to reduce their energy use.	Homeowners, Renters	800
High-Energy PowerMeter Homes	Following an on-line assessment, enables high-energy-using residents to track their real-time energy use through installation of in-home monitoring devices.	Homeowners, Renters	200
Tier 2/3 Upgrades	Leverages the "Energy Upgrade California" program and provides information on: (1) which home upgrades to perform; (2) which rebates are available through PG&E, the State and the Federal government; (3) financing options; (4) how to select a contractor; and (5) how to apply for rebates and financing.	Homeowners	100
			2,610

A list of upgrades by "tier" is shown in Attachment 1.

Marketing and Outreach

To drive program participation, the City, through its recommended contractor (hereafter referred to as "City/contractor"), will promote the program using numerous tools and through multiple channels.

- **Branding:** In order to create an easily recognizable program and help avoid confusion in the marketplace, the City/contractor will leverage the State's "Energy Upgrade California" marketing campaign by branding its own program as "Energy Upgrade Mountain View."
- **Web Site:** The City/contractor will enhance its sustainability web site with comprehensive information on all program elements, including: (1) how to request an in-home Tier 1 assessment; (2) how to determine if you qualify for the high-energy homes program; (3) where to find detailed information on performing Tier 2/3 upgrades and applying for rebates (e.g., PG&E and State) through Energy Upgrade California; and (4) who to contact with questions.
- **Live Help:** The contractor will be available to field questions during business hours, with possible e-mail support in the evenings.
- **Social Marketing:** To augment the web site, the City/contractor will develop a social marketing program for Energy Upgrade Mountain View, including a

Facebook page. Target participants will include single- and multi-family property owners and renters, and specific industry professionals (e.g., home upgrade contractors) who will be in a position to extend the reach of the program.

- **Schools:** The City/contractor will utilize the power of community involvement and competition to encourage the families of schoolchildren to participate in the program. The Mountain View Educational Foundation has already indicated support for this program.
- **Marketing Collateral:** The City/contractor will develop education and outreach materials specific to the four target participant groups. All materials will be customized based on the participant's dwelling type and ability to perform further actions or upgrades.
- **Multicultural Outreach:** In conjunction with Community Outreach staff, the City/contractor will design targeted messaging using multilingual and multicultural media and techniques to reach Mountain View's English, Spanish, Chinese and Russian language communities.
- **Local Partnerships:** To extend the program's reach, the City/contractor will leverage local associations/groups and merchants, e.g., neighborhood associations, HOAs, faith groups, multicultural groups, Green Mountain View and local businesses.
- **Regional Coordination:** The City/contractor will coordinate program activities with the County, including the jointly developed Multi-Family Building Owner pilot program. All program messaging will be consistent with and leverage the County of Santa Clara and State upgrade campaigns around "smart energy use" in the home.

Financial Assistance

Through the Energy Upgrade California program, residents and property owners wishing to undertake Tier 2 and Tier 3 upgrades will have the following incentives available to help them offset some or all of the costs of the upgrades.

Rebate Programs

PG&E offers rebates for either prescriptive (e.g., upgrading five specified items) or performance-based (e.g., attaining a 20 percent energy-efficiency improvement overall) home upgrades. The prescriptive rebate is \$1,000 and the performance rebate starts at

\$2,000 for a 20 percent efficiency improvement, adding \$375 for each additional 5 percent efficiency improvement.

For home and business water-efficiency upgrades, the Santa Clara Valley Water District currently offers rebates for the replacement/installation of items such as washing machines, water softeners, toilets and urinals, landscaping, irrigation equipment and submeters.

Financing Programs

Residents will be able to apply for traditional private financing for more expensive home energy upgrades, including a new two-year "PowerSaver" pilot program to be rolled out by the Federal Housing Administration (FHA) in early to mid-2011.

FHA PowerSaver is a new financing option that will enable homeowners to make energy-saving improvements to their homes through affordable, Federally insured loans from private lenders. Homeowners will be able to borrow money for terms as long as 20 years to make energy improvements of their choice, based on a list of proven, cost-effective measures developed by FHA and the Department of Energy.

Greenhouse Gas Savings

According to an inventory of the City's 2005 community-wide GHG emissions, the residential sector accounts for approximately 13 percent of emissions. The contractor has estimated the recommended program will reduce residential GHG emissions by approximately 2,500 metric tons of CO₂e per year, which is a 2.5 percent reduction in residential emissions. The City's goal for reducing its community-wide emissions is 5 percent below 2005 levels by 2012, so the proposed program would achieve 50 percent of the desired *residential* emissions reductions. Staff has not fully verified the GHG reduction estimation, but will do so and make any adjustments before Council approval in January 2011.

CONCLUSION

To help the City meet its 2012 community-wide GHG emissions reduction targets, the goal of the energy assessment and upgrade program is to engage residents in maximizing the reduction of energy use and GHG emissions through professional home assessments and upgrades. The recommended program achieves this goal by:

- Engaging a broad spectrum of the community (e.g., schools, neighborhood associations, faith and multicultural groups, volunteer organizations and businesses).

- Providing no-cost, Tier 1 energy assessments and instant energy-saving devices to every type of Mountain View resident; i.e., single- and multi-family property owners and renters.
- Helping residents identify the biggest bang-for-the-buck energy-saving actions.
- Targeting high-energy-using homes, where significant savings can often be realized inexpensively by addressing the "standby power" of many appliances.
- Helping residents who want to perform more costly Tier 2/3 home upgrades to understand what utility, State and Federal rebates and financing options are available.
- Achieving 50 percent of the residential GHG emissions reductions desired by 2012.

NEXT STEPS

Staff requests feedback from the CESC regarding the proposed residential energy assessment and upgrade program. If endorsed by the CESC, the program would be implemented according to the following schedule.

Date	Action
January 25, 2011	Present Contract to Council
Early February 2011	Project Kick-Off Meeting
March/April 2011	Roll Out Program to Mountain View Residents
December 31, 2012	Complete Program

PUBLIC NOTICING—Agenda posting.

Prepared by:



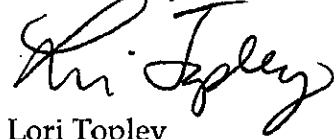
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Reviewed by:



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Linda Forsberg
Business and Internal Services Manager

SPA/7/PWK
916-11-24-10M-E^

Attachment: 1. Home Upgrades by Tier

Attachment 1

Home Upgrades by Tier—Sample List

Tier 1	Tier 2	Tier 3
Compact Fluorescent Lights (CFLs)	Attic Insulation	HERS II Audit—Looks at House as a "System"
Smart Power Strips	Wall Insulation	All Tier 2 Upgrades Deemed Cost Effective/ Applicable
Electrical Socket Insulators	Floor Insulation	Insulation Defects
Refrigerator Thermometers	Duct Sealing or Replacement	Duct Leakage
Retractable Clotheslines	Radiant Barriers	Thermal Barrier Defects
Faucet Aerators	Cool Roofs	Solar PV System
Low-Flow Shower Heads	Energy Efficient Windows	Solar Hot Water System
Programmable Thermostats	Building Envelope Sealing	Combustion Safety Hazards
Old Appliance Replacement (e.g., refrigerator, dishwasher, washing machine, etc.)	Old Appliance Replacement (e.g., A/C, furnace, water heater, etc.)	A/C and Furnace Installation Defects

SPA/7/PWK
916-11-23-10A-E^

Energy Savings Checklist (Resident's Copy)



Volunteer Coordinator:

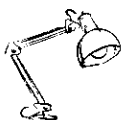
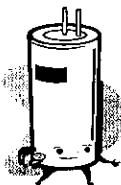
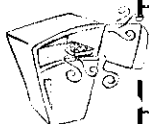
1. Check the items Resident has already completed in first column (Done).
2. Check any recommendations you discuss with the Resident in the second column (Rec).
3. Write in any additional recommendations in space provided.
4. Mark 4-6 recommendations resident wants to implement. Transfer to Resident Commitments form.

Upfront Costs: Low < \$25; Medium < \$200; Investment > \$200

* Insufficient data to project \$ and CO2 savings.

** Saving water saves energy; 20% of energy used in California goes to pump, heat, and treat water.

Done	Rec.	Additional Energy-Saving Upgrades & Habits	Cost	Estimated Annual Savings		
Kitchen			Upfront	\$ Low	\$ High	Lbs CO2
		Eat local food once per week	Free	NA	NA	2,802
		Remove and recycle second refrigerator	Free	\$55	\$409	2,220
		Eat one less pound of meat per week	Free	NA	NA	1,030
		Use microwave when possible	Free	\$16	\$82	473
		Double recipes and freeze half for later	Free	\$25	\$62	418
		Install refrigerator away from heat sources	Free	\$6	\$82	418
		Wash full loads of dishes	Free	\$6	\$30	172
		Minimize door opening; keep refrigerator full	Free	\$3	\$41	209
		Clean coils on refrigerator	Free	\$2	\$29	148
		Scrape, don't rinse dishes	Free	\$7	\$15	80
		Avoid opening oven door	Free	\$2	\$12	72
		Air dry dishes	Free	\$9	\$9	86
		Avoid dishwasher "rinse hold" feature	Free	\$2	\$7	32
		Use leftover oven heat to keep food warm	Free	\$1	\$2	17
		Buy ENERGY STAR refrigerator	Investment	\$22	\$73	458
		Buy ENERGY STAR dishwasher	Investment	\$13	\$42	264
		Buy top-freezer (not side-by-side) refrigerator	Investment	\$5	\$12	83
Water Heater			Upfront	\$ Low	\$ High	Lbs CO2
		Turn off hot water faucet (e.g. shaving)	Free	\$53	\$161	778
		Take shorter showers	Free	\$11	\$161	624
		Wrap water heater with an insulating blanket	Low	\$14	\$64	283
		Fix water leaks	Low	\$6	\$24	110
		Insulate hot water pipes	Low	\$2	\$10	46
		Install timer on electric water heater	Medium	\$12	\$61	265
		Buy a tankless water heater	Investment	\$19	\$254	992
		Replace water heater	Investment	\$24	\$203	825
Lighting			Upfront	\$ Low	\$ High	Lbs CO2
		Turn off unnecessary lights	Free	\$5	\$197	966
		Replace remaining bulbs with CFLs	Low	\$16	\$210	1,080
		Replace halogens	Medium	\$16	\$105	577
		Install motion/daylight sensor in outdoor lights	Medium	\$2	\$44	222
		Use task lighting	Medium	\$1	\$26	131
		Upgrade holiday lighting to LEDs	Medium	\$0	\$4	20



Energy Savings Checklist (Resident's Copy)



Done	Rec.	Additional Energy-Saving Upgrades & Habits	Cost Upfront	Estimated Annual Savings		
Heating				\$ Low	\$ High	Lbs CO2
		Turn thermostat down 1-2 degrees	Free	\$19	\$39	212
		Use space heater; avoid heating all rooms	Low	\$39	\$131	815
		Install programmable thermostat	Low	\$36	\$464	1,816
		Plug air leaks. Weatherstrip doors, windows	Low	\$32	\$308	1,256
		Remove air conditioner	Low	\$30	\$180	1,005
		Insulate and seal leaks in heating ducts	Medium	\$60	\$869	3,378
		Professional furnace inspection and tune-up	Medium	\$30	\$290	1,163
		Install or upgrade ceiling/wall/floor/attic insulation	Investment	\$32	\$770	2,965
		Install double-paned windows	Investment	\$63	\$462	1,942
		Cover windows	Investment	\$51	\$462	1,896
		Buy ENERGY STAR furnace or boiler	Investment	\$60	\$435	1,799
		Install electric ignition in gas furnace	Investment	\$30	\$290	1,163
		Install fireplace doors or damper	Investment	\$30	\$36	179
Cooling			Upfront	\$ Low	\$ High	Lbs CO2
		Raise thermostat for air conditioner	Free	\$2	\$36	179
		Turn off the heater pilot light in summer	Free	\$1	\$16	82
		Clean or replace furnace filter	Low	\$12	\$145	570
		Clean or replace air conditioner filter	Low	\$1	\$9	46
		Provide shade for A/C condenser	Low	\$1	\$5	29
		Buy ENERGY STAR air conditioner	Investment	\$39	\$39	378
		Install whole house attic fan and turn off A/C	Investment	\$41	\$87	612
		Shade house	Investment	\$1	\$14	72
		Install a ceiling fan and raise A/C by two degrees	Investment	\$1	\$4	24
Electronics/Office Equipment			Upfront	\$ Low	\$ High	Lbs CO2
		Turn off/unplug electronics when not in use	Low	\$39	\$131	815
		Print double sided	Free	\$0	\$13	*
		Put office equipment on power strip with timer	Low	\$5	\$19	114
		Buy multipurpose office equipment	Medium	\$0	\$40	193
		Use laptop rather than desktop computer	Investment	\$20	\$118	662
		Buy ENERGY STAR LCD TV, not plasma	Upgrade	\$25	\$40	310
		Buy ENERGY STAR computer/office equipment	Investment	\$19	\$50	333
		Use inkjet rather than laser printer	Investment	\$14	\$43	276
		Buy electronics without a clock	Investment	\$10	\$105	552



CITY OF MOUNTAIN VIEW RESIDENTIAL ENERGY ASSESSMENT AND UPGRADE PROGRAM

— SCOPE OF SERVICES —

High Energy Audits (HEA), in partnership with Acterra, will conduct the following activities toward developing, managing, and reporting on a City of Mountain View (City) residential energy assessment and upgrade program called “Energy Upgrade Mountain View.” This document supplements the proposal submitted by HEA to the City on October 11, 2010, which provides additional details on the tasks contained in this document.

Program Design

1. Participate in a Kick-Off meeting to establish the lines of communication and procedures for implementing this Scope of Work.
2. Collaborate with City staff to develop a conceptual project plan, including program design elements, a Marketing and Communications Plan, and an estimated timeline.
3. Participate in on-going project team meetings.
4. Establish a set of criteria for measuring the effectiveness of the overall program and of individual components, such as initial response rates, follow-through rates, completion rates, and energy and GHG savings.
5. Monitor program progress and adjust program elements to maximize effectiveness based on agreed-upon goals.
6. Comply with all Federal and State laws, regulations and guidelines that apply to Energy Efficiency and Conservation Block Grant (EECBG) formula grants.

Program Branding and Marketing

7. Design and implement Energy Upgrade Mountain View branding/advertising elements, to minimally include a logo, tagline, website banners, buttons, and search engine key words for targeted, local online campaigns.

8. Conduct focus groups to receive feedback on early versions of Energy Upgrade Mountain View materials.
9. Develop outreach and educational materials (including in-home assessment leave-behind materials) appropriate for each type of Mountain View resident (single-family homeowners, multi-family property owners, single-family renters, and multi-family renters) and their ability to perform relevant behavior-change actions or dwelling upgrades. Ensure that all materials leverage the County and State retrofit campaigns (i.e. Santa Clara County Residential Retrofit Program and Energy Upgrade California (EUC)).
10. Create “Energy Upgrade Mountain View” web pages that provide information on all program elements, including where to go for additional information and whom to contact for help.
11. Develop a social marketing strategy targeting all Mountain View residents and specific industry professionals who are in a position to extend the reach of the program.
12. Perform outreach to Mountain View residents, through avenues such as schools, neighborhood associations, homeowner associations, faith and multicultural groups, volunteer organizations such as Green Mountain View, industry professionals, the Chamber of Commerce and local businesses.
13. Work with City Community Outreach staff to (1) determine which outreach/advertising elements should be presented in Spanish, Chinese and Russian, (2) develop targeted outreach materials, and (3) ascertain the best avenues for reaching non-English speakers. Present all translated materials to City Community Outreach staff for review.

Program Implementation

14. Deploy a Mountain View-branded online assessment tool that (1) identifies participants as regular or high-energy users and as homeowners or renters, (2) explains what assessments and options are available, and (3) allows participants to select programs for which they qualify.
15. For high energy-using homes, provide an in-depth survey that (1) helps residents understand their energy use, (2) pre-qualifies appropriate homes for the Energy Upgrade California program, which helps homeowners with more extensive upgrades, and (3) identifies ways for residents to reduce their energy use through no- or low-cost actions.
16. Schedule and conduct no-cost-to-participant, in-home Tier 1 energy assessments, which will include (1) walking through the home to evaluate energy saving opportunities, (2) reviewing an energy savings checklist with residents, (3) installing simple efficiency devices and measures (e.g., compact fluorescent lights, smart power strips, low-flow

showerheads), (4) getting a signed commitment for those additional actions the residents will perform on their own, (5) for homeowners, reviewing the costs and benefits of performing more extensive Tier 2 and 3 home upgrades and where to get more information on this topic, and (6) providing residents with leave-behind information on additional ways to save energy, helpful websites, and other relevant information, customized for the type of resident.

17. Conduct post-assessment follow-up, including (1) customer satisfaction surveys on at least 5% of participants who receive a Tier 1, in-home assessment, and 5% of participants who provide online access to their PG&E electricity and natural gas data, and (2) behavior change commitment reminders for participants making such commitments. Based on survey responses, follow up with participants as appropriate. Track and be able to report on the results of the satisfaction surveys and behavior change commitment reminders.
18. Work with the County to jointly develop and implement an energy efficiency and upgrade program targeted at multi-family property owners, to include modest rebates for a limited number of property owners.
19. Provide phone and email support during business hours (9am-5pm) to help residents take advantage of all relevant program elements. Help residents who want to perform Tier 2/3 home assessments and upgrades to understand where to go for detailed information, including available rebates and financing options. Provide limited support after hours (5pm-9pm).
20. Achieve a 2,500 metric tonne reduction in CO₂-e per year.

Measurement and Reporting

21. Measure, track and analyze program effectiveness and results on an on-going basis, and modify program components as needed. Monitor utility bills of participants who provide online access to their PG&E electricity and natural gas data, and analyze actual vs. expected energy use changes.
22. Provide all necessary data for City staff to comply with quarterly, annual and end-of-project EECBG reporting requirements.
23. Provide monthly progress reports to the City to highlight program activities and results, including the work of major sub-consultants on this program, and to identify areas/items of concern or needing discussion.
24. Determine the most effective program components and campaigns and deliver a "Final Report" to the City, including a list of recommendations on how to make future campaigns even more impactful.

25. Complete all actions in this Scope of Work by December 31, 2012.

Summary of Program Elements

Program Element	Description	Target Participants	# of Homes
Tier 1 Single-Family	No-cost, in-home assessments based on an 80-point checklist that includes installing simple efficiency devices and measures (e.g., compact fluorescent lights, smart power strips, and low-flow showerheads) and engages residents in making behavior change commitments. (Performed by Acterra)	Homeowners, Renters	250
Tier 1 Multi-Family	No-cost, in-home assessments based on an 80-point checklist that includes installing simple efficiency devices and measures (e.g., compact fluorescent lights, smart power strips, and low-flow showerheads) and engages renters in making behavior change commitments. (Performed by Acterra)	Renters	250
Schools	A combination of age-appropriate household energy efficiency educational materials and a competition to see which local schools can generate the highest level of greenhouse gas reductions.	Homeowners, Renters	1,000
Multi-Family Building Owner	In conjunction with the County, a pilot program to educate and provide modest rebates for building owners to make energy- and water-saving upgrades.	Building Owners	10 M/F Bldgs.
High-Energy Homes	No-cost, "intelligent" online assessments that help high-energy-using residents identify ways to reduce their energy use.	Homeowners, Renters	800
Tier 2/3 Upgrade Information	Provide information on "Energy Upgrade California," focusing on participants best suited for EUC based on their home energy use characteristics.	Homeowners	100
			2,410

Energy Upgrade Mountain View Budget by Phase

Program Manager	\$ 48,000
Program Design and Reporting	\$ 15,000
Website Development	\$ 5,000
Online Assessment/Monitoring Tool	\$ 18,000
Promotional Materials, Social Marketing, and Outreach	\$ 18,000
Tier 1 Single-Family In-Home Assessments	\$ 90,000
Tier 1 Multi-Family In-Home Assessments	\$ 50,000
GreenStart Schools Program	\$ 25,000
Multi-Family Building Owner Pilot Program (Rebates)	\$ 10,000
High-Energy Homes Online Assessments	\$ 40,000
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	\$ 319,000